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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/709,995	11/13/2000	Min-Shin Ma	M-10394 US	4659

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PARSONS HSUE & DE RUNTZ LLP  
655 MONTGOMERY STREET  
SUITE 1800  
SAN FRANCISCO, CA 94111

EXAMINER
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HA, YVONNE QUY M

ART UNIT	PAPER NUMBER
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2664

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/709,995

Applicant(s)

MIN-SHIN MA

Examiner

Yvonne Q. Ha

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☒ Claim(s) 30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. New corrected drawings are required in this application because the drawings are not labeled in sequential order, such as Figure 13 is presented with Figure 1 of prior art. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

#### ***Claim Objections***

2. Claim 30 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim of claim 30. See MPEP § 608.01(n). Accordingly, the claim 30 has not been further treated on the merits. For the purpose of examining, the Examiner assumed claim 30 is dependent of claim 24.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Trost et al. (US PUB 2002/0151275).

Referring to claims 1, 20, and 24, Trost discloses an Bluetooth device (figure 2A), comprising: at east one buffer (page 5, paragraph 74, FIFO within physical layer) storing HCI

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level ACL/SCO or L2CAP data packets (figure 9; page 4, paragraph 69; page 5, paragraph 75); and a packet generator (figure 8, i.e. Link manager) that retrieves data from and stores data into the at least one buffer without employing any other storage (page 5, paragraphs 79-81) and that converts data retrieved from or stored into the at least one buffer between Bluetooth data packet format and HCI level ACL/SCO or L2CAP data packet format (page 6, paragraph 86, 87).

Referring to claim 2, Trost discloses all aspects of the claimed invention and further teaches the generator (figure 8, i.e. Link manager) employs pointers to addresses in the at least one buffer for identifying data that is to be retrieved from the at least one buffer (page 6, paragraphs 81, 82).

Referring to claim 3, Trost discloses all aspects of the claimed invention and further teaches the generator updates pointer values after at least one data transmission of data from the at least one buffer (page 6, paragraphs 83, 84, based on header bit indicating beginning of L2CAP packet).

Referring to claims 4, 7, 8, 26, 29, 30, Trost discloses all aspects of the claimed invention and further teaches the generator sets a previous starting pointer value and a starting pointer value and updates said pointer values after said at least one data transmission of data from the at least one buffer (page 6, paragraphs 83, identifying present packet and beginning of another packet).

Referring to claim 5, 27, Trost discloses all aspects of the claimed invention and further teaches the generator updates said pointer values by setting the previous starting pointer value to be equal to the starting pointer value before the transmission, and sets the next starting pointer value to a new value (page 10, paragraphs 136).

Referring to claims 6, 28, Trost discloses all aspects of the claimed invention and further teaches the generator sets a previous starting pointer value and a starting pointer value and checks whether a previous transmission by the generator has been successfully received by another device, and sets the next starting pointer value equal to the previous starting pointer value that was effective prior to the previous transmission when there is indication that the previous transmission by the generator has not been successfully received by such another device (page 12, paragraphs 154, 155, figure 24).

Referring to claim 9, Trost discloses all aspects of the claimed invention and further teaches comprising a link controller and a link manager monitoring whether the at least one buffer is full or empty (figure 8, i.e. link manager; page 5, paragraphs 79, 81, using protective bit to gage full or empty FIFO).

Referring to claims 10 and 31, Trost discloses all aspects of the claimed invention and further teaches the link controller checks for indication that the at least one buffer is full, and causes a negative acknowledgment to be sent to another device when there is indication that the at least one buffer is full when is packet is received (page 5, paragraphs 79, 81, using protective bit to gage full or empty FIFO).

Referring to claim 11, Trost discloses all aspects of the claimed invention and further teaches buffer has a field for storing length of data stored in the buffer, wherein said generator alters the length of data stored in the field after at least one storing of data into the buffer (page 4, paragraphs 68).

Referring to claim 12, Trost discloses all aspects of the claimed invention and further teaches buffer and said generator connected without a physical link (pages 4-5, paragraphs 70, 74, FIFO within physical layer, link manager interface between protocols).

Referring to claim 13, Trost discloses all aspects of the claimed invention and further teaches a memory controller controlling access to the buffer by the generator and an HCI (figures 16, 17; page 7, paragraphs 91-99).

Referring to claims 14, 22, Trost discloses all aspects of the claimed invention and further teaches a host memory controller controlling access to the buffer by the generator and a host driver (figures 16, 17; pages 7-8, paragraphs 95-103).

Referring to claim 15, Trost discloses all aspects of the claimed invention and further teaches the host memory controller also controls access to the buffer by a HCI (figures 16, 17; pages 7-8, paragraphs 95-103).

Referring to claim 16, Trost discloses all aspects of the claimed invention and further teaches the buffer forms a portion of a host memory (page 7, paragraphs 99).

Referring to claim 17, Trost discloses all aspects of the claimed invention and further teaches the generator includes a hardware circuit segmenting a HCI ACL or L2CAP data packet and inserting a segment of data from the HCI ACL or L2CAP data packet into a Bluetooth packet (figures 13, 14, and 16; page 6-7, paragraphs 86-88, 92).

Referring to claim 18, Trost discloses all aspects of the claimed invention and further teaches the generator includes a composer/decomposer (page 7, paragraphs 91-95).

Referring to claim 19, Trost discloses a Bluetooth device (figure 2A), comprising: at least one buffer (page 5, paragraph 74, FIFO within physical layer) storing HCI level ACL/SCO or

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L2CAP data packets (figure 9; page 4, paragraph 69; page 5, paragraph 75); and a packet generator (figure 8, i.e. Link manager) that segments (figure 16; page 7, paragraphs 91, 92) and retrieves data from the at least one buffer without employing any other storage (page 5, paragraphs 79-81) and that converts segments of data retrieved from the at least one buffer from HCI level ACL/SCO or L2CAP data packet format to Bluetooth data packet format (page 6, paragraph 86, 87).

Referring to claim 21, Trost discloses a Bluetooth device (figure 2A), comprising: a HCI (figure 2B, reference 231); at least one buffer (page 5, paragraph 74, FIFO within physical layer) storing HCI level ACL/SCO data packets (figure 9; page 4-5, paragraph 69, 75); a packet generator (figure 8, i.e. Link manager) that retrieves data from and stores data into the at least one buffer without employing any other storage and that converts data retrieved from or stored into the at least one buffer between Bluetooth data packet format and HCI level ACL/SCO data packet format (page 6, paragraph 86, 87); a memory controller controlling access to the buffer by the generator and the HCI (figures 16, 17; pages 7-8, paragraphs 95-103).

Referring to claim 23, Trost discloses a Bluetooth device (figure 2A), comprising: a host driver (figures 13; page 6, paragraph 86); at least one buffer (page 5, paragraph 74, FIFO within physical layer) storing HCI level ACL/SCO or L2CAP data packets (figure 9; pages 4-5, paragraphs 69, 75); a packet generator (figure 8, i.e. Link manager) that retrieves data from and stores data into the at least one buffer without employing any other storage (page 5, paragraphs 79-81) and that converts data retrieved from or stored into the at least one buffer between Bluetooth data packet format and HCI level ACL/SCO or L2CAP data packet format (page 6,

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paragraphs 86, 87); and a memory controller controlling access to the buffer by the generator and the host driver (figures 16, 17; pages 7-8, paragraphs 95-103).

Referring to claim 25, Trost discloses all aspects of the claimed invention and further teaches pointers are employed to addresses in the at least one buffer for identifying data that is to be retrieved from the at least one buffer (page 6, paragraphs 81, 82), further comprising updating pointer values after at least one data transmission of data from the at least one buffer (page 6, paragraphs 83, 84, based on header bit indicating beginning of L2CAP packet).

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Larsson et al. (US Patent 6,704,293) discloses broadcast as a triggering mechanism for route discovery in Ad-hoc networks
- Van Der Zee et al. (USPUB 2002/0041592) discloses system for transmitting data
- Atkinson et al. (USPUB 2002/0012329) discloses communication apparatus interface and method for discovery of remote devices
- Ayyagari et al. (USPUB 2002/0033554) discloses proxy-bridge connecting remote users to a limited connectivity network

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvonne Q. Ha whose telephone number is 703-305-8392. The examiner can normally be reached on Monday-Friday 7a.m.-4p.m. Eastern.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ajit Patel can be reached on 703-308-5347. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

YQH

  
Ajit Patel  
Primary Examiner